

Application No.: 09/855,343  
Docket No.: DP6760US

In the Claims

Please amend the claims as follows:

1. (currently amended) A melt spinning apparatus for spinning continuous polymeric filament comprising:
  - (a) a spinneret having a plurality of capillaries;
  - (b) a polymer delivery system which is arranged to communicate with said spinneret and deliver molten polymer there through to produce a continuously moving array of molten polymeric filaments corresponding to the arrangement of capillaries in the spinneret;
  - (c) a quench zone positioned below said spinneret and arranged to receive and cool the array of molten filaments as they move through by passing a cooling gas inward with respect to the array of moving filaments; and
  - (d) a finish applicator positioned inside or below the quench zone to apply an amount of finishing liquid to the array, wherein said finish applicator comprises:
    - (i) a base plate having a peripheral edge which corresponds to the cross-section of the array of moving molten filaments; and
    - (ii) a tapered shaped body portion, the tapered shaped body having an angle beta (β) in the range of about 45 degrees to about 170 degrees for smoothly deflecting accumulated quench air from inside the filament array to outside the array and having a top and bottom concentric therewith and connected to said base plate, wherein said bottom corresponds in shape to the shape defined by the peripheral edge of the base plate, and [the] having a surface formed by a plurality of lines drawn between said top and said bottom [tapers] tapering outwardly with respect to the direction of movement of the filament array.
2. (original) The apparatus of claim 1, further comprising a means for moving the finish applicator into and out of the array of filament.

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3. (original) The apparatus of claim 1, wherein said quench zone is a radial, cross-flow, or pneumatic quench zone.
4. (original) The apparatus of claim 1, wherein said applicator is a conical-shaped finish applicator.
5. (original) The apparatus of claim 1, wherein the finish applicator includes a filament contact surface coated with ceramic oxide.
6. (original) The apparatus of claim 1, wherein said finish applicator comprises one or more peripheral finish delivery slots that communicates with a peripheral fiber contact surface.
7. (original) The apparatus of claim 1, wherein said finish applicator is positioned a distance ranging from 120 mm to 200 mm below said spinneret.
8. (original) The apparatus of claim 1, wherein said finish applicator is positioned a distance ranging from 200 mm to 400 mm below said quench zone.
9. (original) The apparatus of claim 1, wherein the array of the filaments being annular comprise an inner and an outer filament array diameter that determine the diameter of said finish applicator in a range of 70% to 120% of the outer filament array diameter.
10. (original) A melt spinning apparatus for spinning continuous polymeric filaments, comprising a finish applicator to apply an amount of finishing liquid to an array of filaments, positioned inside or below a quench zone that is arranged to receive a stream of cooling gas directed radially inward, wherein said finish applicator comprises:

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- (i) a base plate having a peripheral edge which corresponds to the cross-section of the array of moving molten filaments; and
- (ii) a tapered shaped body portion, the tapered shaped body having an angle beta (B) in the range of about 45 degrees to about 170 degrees for smoothly deflecting accumulated quench air from inside the filament array to outside the array and having a top and bottom concentric therewith and connected to said base plate, wherein said bottom corresponds in shape to the shape defined by the peripheral edge of the base plate, and [the] having a surface formed by a plurality of lines drawn between said top and said bottom [tapers} tapering outwardly with respect to the direction of movement of the filament array.

11. (cancelled)

12. (previously amended) The melt spinning apparatus of claim 10, wherein the finish applicator further comprises a peripheral delivery slot for delivering the finishing liquid to the filament array, and wherein said peripheral delivery slot communicates with a peripheral fiber contact surface on an outer surface of the body portion.

13. (previously amended) The melt-spinning apparatus of claim 12, wherein the finish applicator further comprises an arm having channels for delivery and drainage of said finishing liquid, wherein said arm supports said finish applicator and further wherein said arm is connected to said peripheral delivery slot.

14. (previously amended) The melt spinning apparatus of claim 10, wherein said finish applicator is mounted on a linear motion device.

15. (cancelled)

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16. (cancelled)

17. (cancelled)

18. (cancelled)

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (cancelled)

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (currently amended) A melt spinning apparatus for spinning continuous polymeric filaments, comprising a finish applicator to apply an amount of finishing liquid to an array of filaments, positioned inside or below a quench zone that is arranged to receive a stream of cooling gas directed inward, wherein said finish applicator comprises

(i) a base plate having a peripheral edge which corresponds to the cross-section of the array of moving molten filaments; and

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(ii) a tapered shaped body portion, the tapered shaped body having an angle beta (β) in the range of about 45 degrees to about 170 degrees for smoothly deflecting accumulated quench air from inside the filament array to outside the array and having a top and bottom concentric therewith and connected to said base plate, wherein said bottom corresponds in shape to the shape defined by the peripheral edge of the base plate, and the having a surface formed by a plurality of lines drawn between said top and said bottom ~~tapers~~ tapering outwardly with respect to the direction of movement of the filament array.